

National Public Health Institutes and Health Systems Strengthening

IANPHI Annual Meeting

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Healthier, safer, longer, and more productive lives

- Public health has improved health and lengthened life in high-income nations
- Many middle-income and some lower-income countries are on a similar trajectory
- Health system strengthening depends on a public health system that prevents and controls disease



Source: Gilbert Awekofua/Photoshare



What is a National Public Health Institute (NPHI)?

- Science-based
 - Source of objective information and counsel
 - Staff with wide range of skills and experience
- Performs essential public health functions
 - National leadership and expertise
 - Focal point to develop/strengthen national public health systems
- Usually part of national government (MOH)
 - Links to other Ministries, subnational agencies



Core attributes of NPHIs

- National scope of influence
- National recognition
- Scientific basis
- Shielded from political influence
- Focus on major public health problems
- Adequate human and financial resources
- Adequate infrastructure support
- Linkages and networks
- Accountability



Role of NPHIs

- Monitor and respond to health threats
 - Disease surveillance, detection, and monitoring
 - Outbreak investigation and control
 - Laboratories
- Provide information, oversight, and program implementation
- Coordinate public health strategy, policy advice, and program delivery
 - Professional and institutional identity
 - Critical mass of technical and scientific talent
 - Improved effectiveness and efficiency



Core NPHI functions

- Evaluation and analysis
- Surveillance, investigation, and control
- Research in public health
- Prevention programs and health promotion
- Social participation
- Planning and management
- Regulation and enforcement
- Evaluation and promotion of equitable access
- Human resource development and training
- Quality assurance in personal and population-based health services
- Reduction of impact of emergencies and disasters



Other NPHI functions

Often conducted in partnership with other Ministries or institutions

- Disease specific control programs
- Support to state/provincial/local public health entities
- Surveillance and control of non-communicable diseases and injuries
- Occupational health
- Community surveillance
- Viral registration
- Environmental health and safety



Synergy of multi-disciplinary approach

- Close proximity and coordination of laboratory and epidemiology functions are essential for effective and efficient disease control
- Disease control programs benefit from multi-disciplinary approach that engages epidemiologists, health educators, communication and evaluation specialists, laboratorians, etc.



Coordination can strengthen individual public health functions

- Infectious diseases programs promote urgency and emphasize need to act promptly
 - Emphasis on timeliness and outcomes can improve NCD control programs
- NCD programs bring greater sophistication in behavioral/social science and epidemiological and biostatistical analysis
 - Improves infectious disease epidemiology and control measures



Cross-functionality is increasingly critical

- Significant advantages from grouping programs
- Increased need for skills and expertise that span individual functions:
 - Pandemic flu control -- immunizations, laboratory, protective equipment efficacy, veterinary medicine, communication, health education, and occupational health
 - Biosecurity threats -- infectious diseases, chemical hazards, toxicology, engineering, environmental contamination, physical characteristics of agents, and risk communication



Because every country is different, each NPHI will have a different role

Unique history and role specific to host country based on differences in:

- Circumstances of establishment
- Relationships with Ministry of Health and other government agencies/nongovernmental organizations
- Resource availability

Because of differences, may emphasize some but not all core functions

- Can take years from creation until capacity to perform core functions and address range of health problems
- Some have taken on additional responsibilities over time



Public health is local, so NPHI relationships with local agencies are critical

Strong relationships and successful engagement with subnational/local agencies

- Depends on whether direct supervisory role over local or if local has greater autonomy

Level of subnational public health support

- Funds and personnel (long/short term)
- Reference laboratory services
- More comprehensive oversight and support



NPHI Relationships with other Ministries and agencies

Great variance in relating to other national and subnational agencies

- Consultant on rare or difficult issues
- Back-up support with extra capacity and staff
- Quality control or verification role
- Human or fiscal resources (including training)
- Develop guidelines for local implementation
- Health in all policies

Relationships with global/regional public health agencies (WHO, PAHO)



Training and educational programs

NPHIs seek to deliver mixture of service, research, and training

- Courses for own staff as well as other public health workers to strengthen health systems and increase capacities

Apprentice approach can be very effective

- Trainees perform tasks while learning skills and acquiring knowledge under close supervision
- Public health equivalent to graduate training in clinical medicine
- Strengthens institution also



CDC's Field Epidemiology Training Program

Two-year, full-time, postgraduate

- Modeled after CDC's Epidemic Intelligence Service

Since 1980, helped build 35 FETPs, serving 51 countries

- >2,000 graduates
- >80% stay in home countries after graduating

Effective, low-cost, practical

- But has trained only small proportion of numbers needed



Brazil FETP and rubella elimination

FETP investigations 2000-06 provided key data

- 6 investigations, risk group: males 20-29 years
- Complementary surveillance & applied research
- National Immunization Program study confirms findings

National Rubella Vaccine Campaign, Sep-Dec 08

- 70 million adults (20-39 years) vaccinated
- Largest rubella vaccine campaign in history

Since campaign, no rubella cases in Brazil



Dichotomies

Challenges that define the scope of NPHI activities

Separation of functions

- Which at MOH; which at NPHI?

Degree of independence from Ministry

- NPHI must be independent, technically expert agency
- NPHI must be shielded from political influence and transitions
- But if seen as too independent, may not be called on to address important health challenges

Regulation vs. guidance/recommendations

More like CDC or more like NIH?



Challenges that define the scope of NPHI activities

Service provision, training, and research

- EIS, FETP

Means chosen to directly improve health

- Vertical vs. horizontal
- Health communication
(including active media outreach)
- Community mobilization
(e.g., immunization campaigns)
- Policy change can be effective--but
increases perception of politicalization



NPHIs must adapt to changes in the public health landscape

Evolve over time to meet new challenges

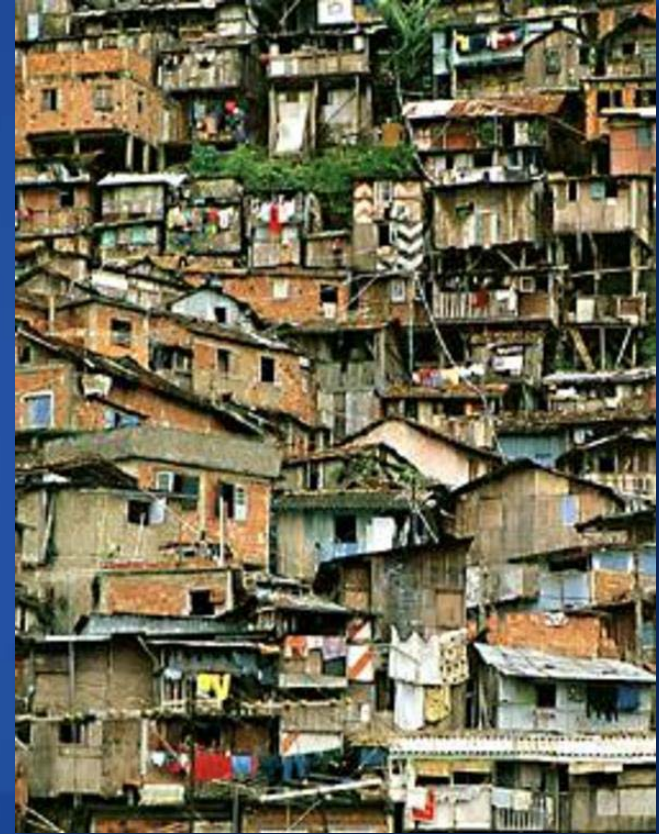
- Increasing complexity of health care
- Budgetary constraints
- New and emerging infectious disease threats
- Growing burdens of non-communicable diseases and injuries

Success depends on accurate collection, analysis, and dissemination of data to improve health



For the first time in global history...

- More people live in urban than rural areas
- There are more people who are overweight than underweight
- There are more deaths among adults than children
- Higher rates of NCDs in developing than developed countries

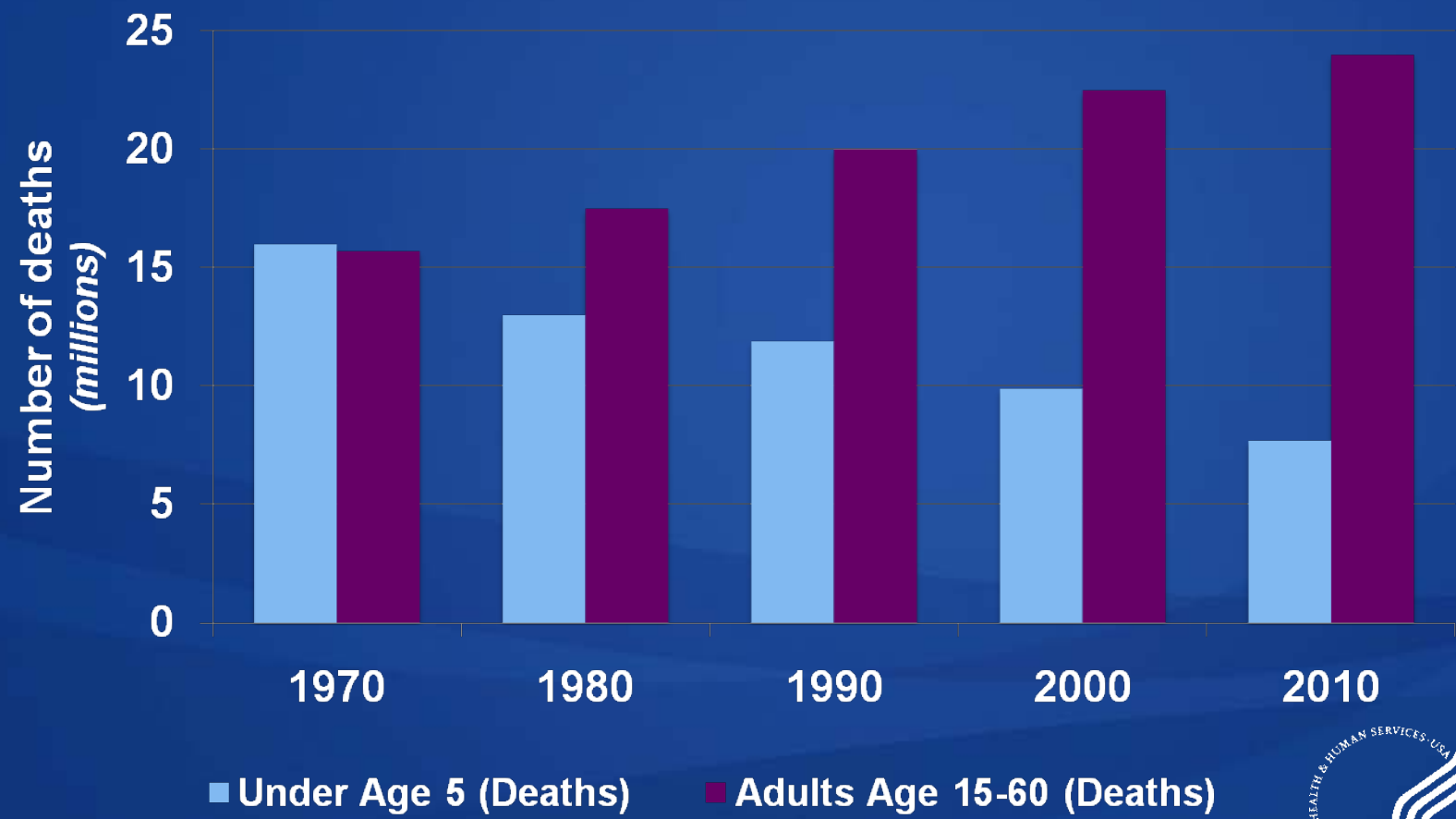


Non-communicable diseases in the developing world

- NCDs now kill more people globally than infectious disease
- NCD burden has risen rapidly and is a major threat to economic and social development
- By 2020, NCDs will kill almost 4x as many people globally as infectious disease
- Will affect the poor most heavily, who die at earlier ages



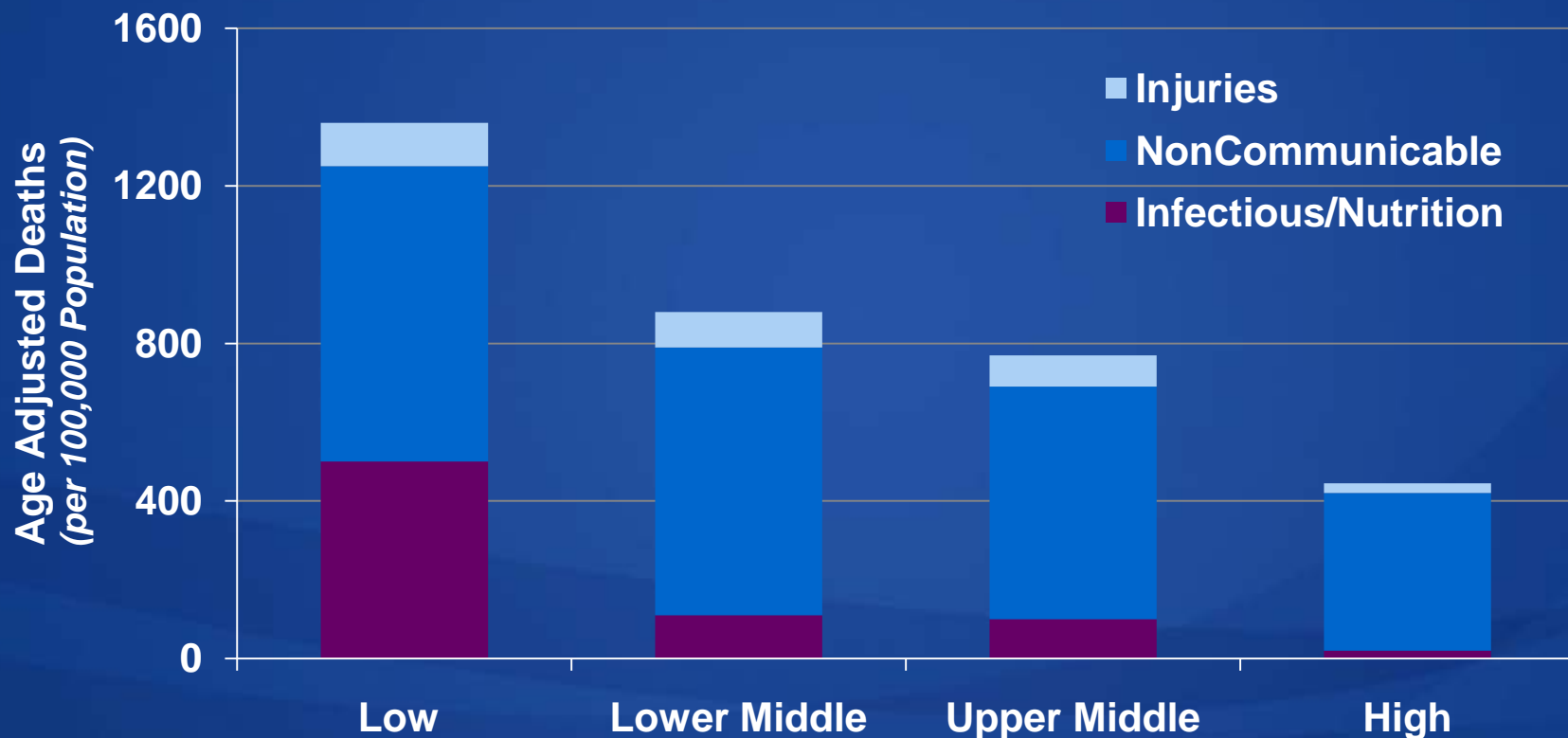
40 years ago, there were a similar number of deaths among children and young/middle-aged adults. Today there are more than 3 times as many deaths among young/middle-aged adults as among children



■ Under Age 5 (Deaths) ■ Adults Age 15-60 (Deaths)



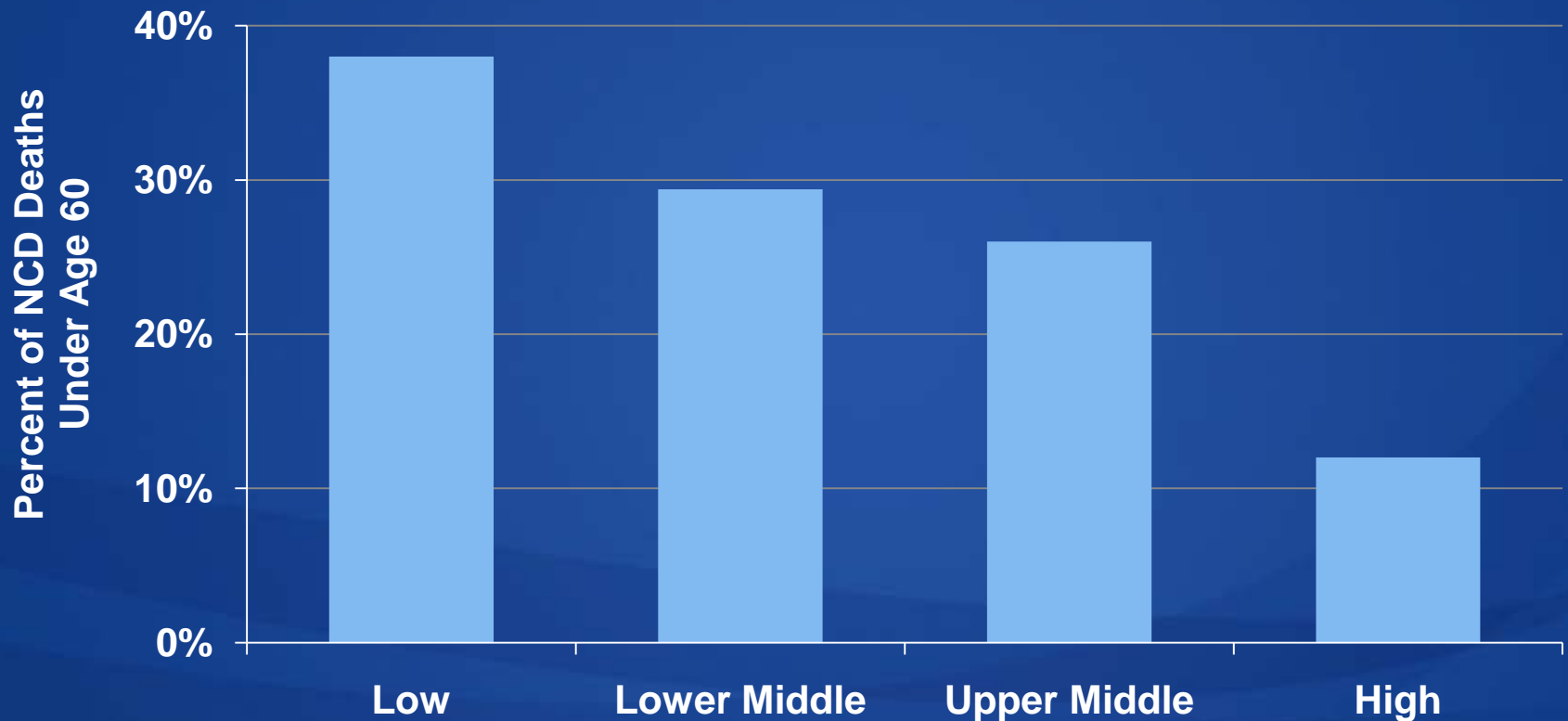
Non-communicable disease kills far more people than infectious disease – even in low-income countries



Data: WHO, 2004.



People in poorer countries are more likely to die prematurely from NCDs than people in wealthier countries





empower

Monitor tobacco use
and prevention policies

Protect people from
tobacco smoke

Offer help to quit
tobacco use

Warn about the dangers
of tobacco

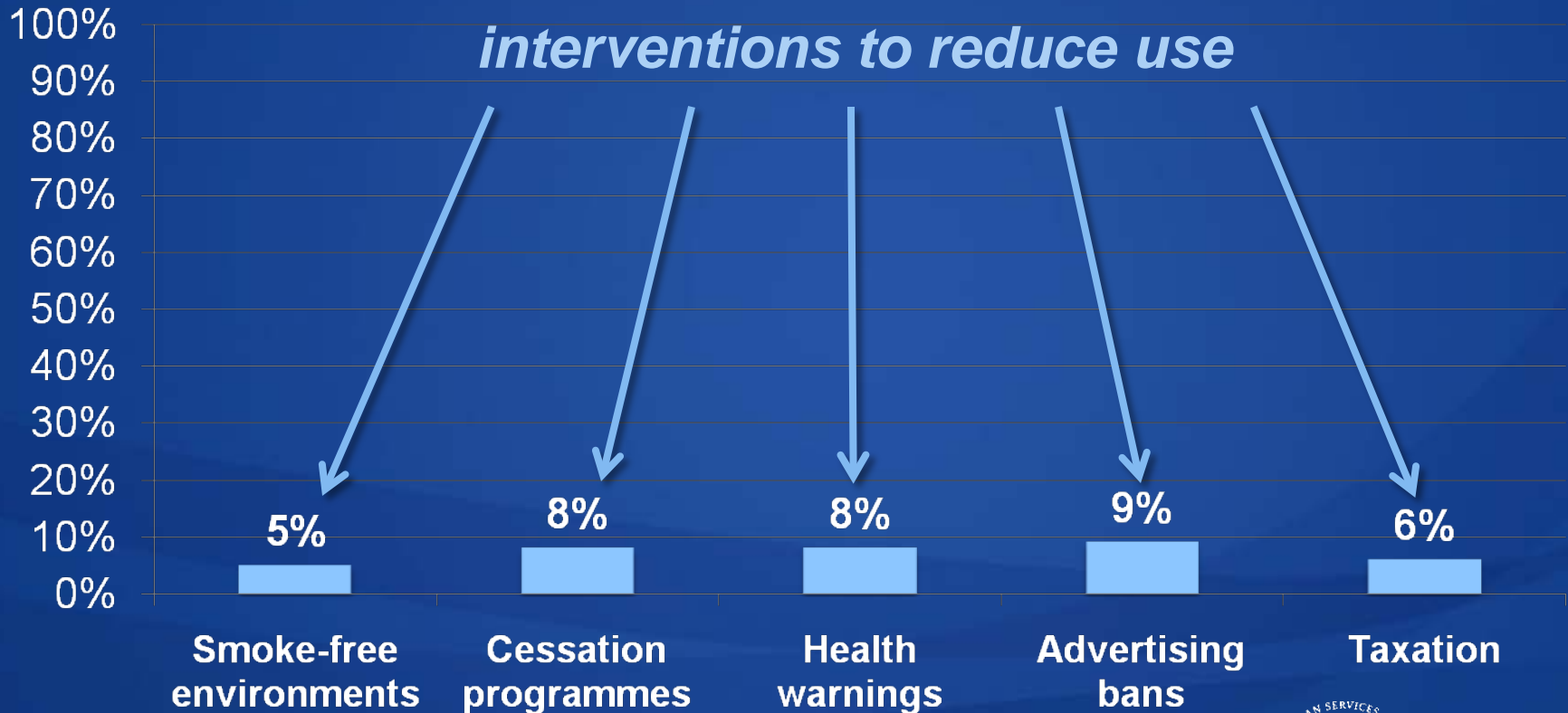
Enforce bans on tobacco
advertising, promotion and sponsorship

Raise taxes on tobacco

No one MPOWER policy has yet been comprehensively implemented to cover even 10% of the world's people

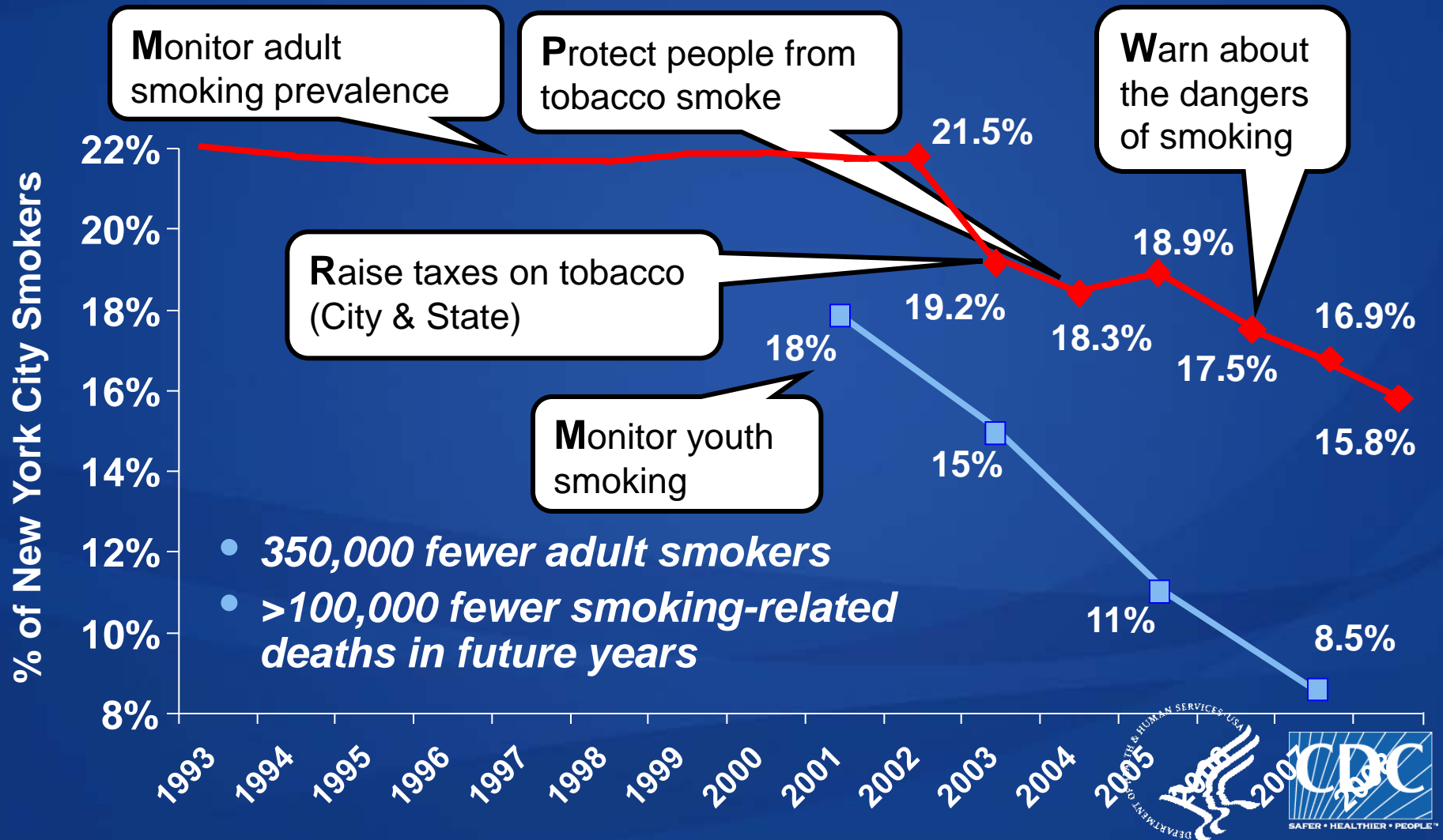
Share of world population

9% or less benefit from effective interventions to reduce use





Evidence-based tobacco control interventions in NYC



MPOWER interventions reduced smoking prevalence in Uruguay

- One of the sharpest declines ever reported
- Coordinated package of interventions
 - Smoking ban (first country in Americas to go 100% smoke-free)
 - Comprehensive ad ban
 - Large pictorial warning labels
 - Cessation services
 - High taxes



Data: Global
Adult Tobacco
Survey



Thank you!

